

Hawai'i Clean Water State Revolving Fund Affordability Criteria

Updated 10/13/2021

Pursuant to the Federal Water Pollution Control Act (FWPCA) as amended by the Water Resources Reform and Development Act of 2014 (WRRDA), it is required to establish affordability criteria for the State of Hawai'i Clean Water State Revolving Fund (CWSRF) program no later than September 30, 2015.

The affordability criteria are required to assist with the identification of applicants that would experience a significant hardship raising the revenue necessary to finance a project eligible for assistance if additional subsidization is not provided. Additional subsidization in the form of principal forgiveness to applicants identified by the affordability criteria may be offered. The affordability analysis must include the applicant's income and unemployment data, population trends, and other data determined relevant by the State of Hawai'i Department of Health (DOH).

The Hawai'i CWSRF program is authorized to provide up to 30 percent of the capitalization grant for any fiscal year as additional subsidization to assist the four (4) applicant/borrower counties. The Hawai'i CWSRF affordability criteria will neither singly determine nor guarantee whether the DOH and an applicant/borrower county will enter into an executed loan agreement with additional subsidization.

The Hawai'i CWSRF affordability criteria are described in Table 1. The Hawai'i CWSRF has only four (4) CWSRF applicant/borrower counties. The affordability criteria utilize the following indicators for each of the four (4) applicant/borrower counties and the State as a whole.

1. Population trend (2018-2019);
2. Unemployment rate; and
3. Median household income (MHI).

Table 1: Hawai'i CWSRF Affordability Criteria

| Location | Hawai'i State | Hawai'i County | Honolulu County | Kalawao County | Kaua'i County | Maui County |
|---------------------|---------------|----------------|-----------------|----------------|---------------|-------------|
| Population (2018) | 1,422,029 | 197,658 | 987,638 | 75 | 71,377 | 165,281 |
| Population (2019) | 1,422,094 | 199,459 | 984,821 | 66 | 71,769 | 165,979 |
| Unemployment (2019) | 4.3% | 6.2% | 4.0% | 0.0% | 3.8% | 4.0% |
| MHI (2019) | \$81,275 | \$62,409 | \$85,857 | \$69,375 | \$83,554 | \$80,948 |

*Data excerpted from 2015-2019 American Community Survey 5-Year Estimates (attached)

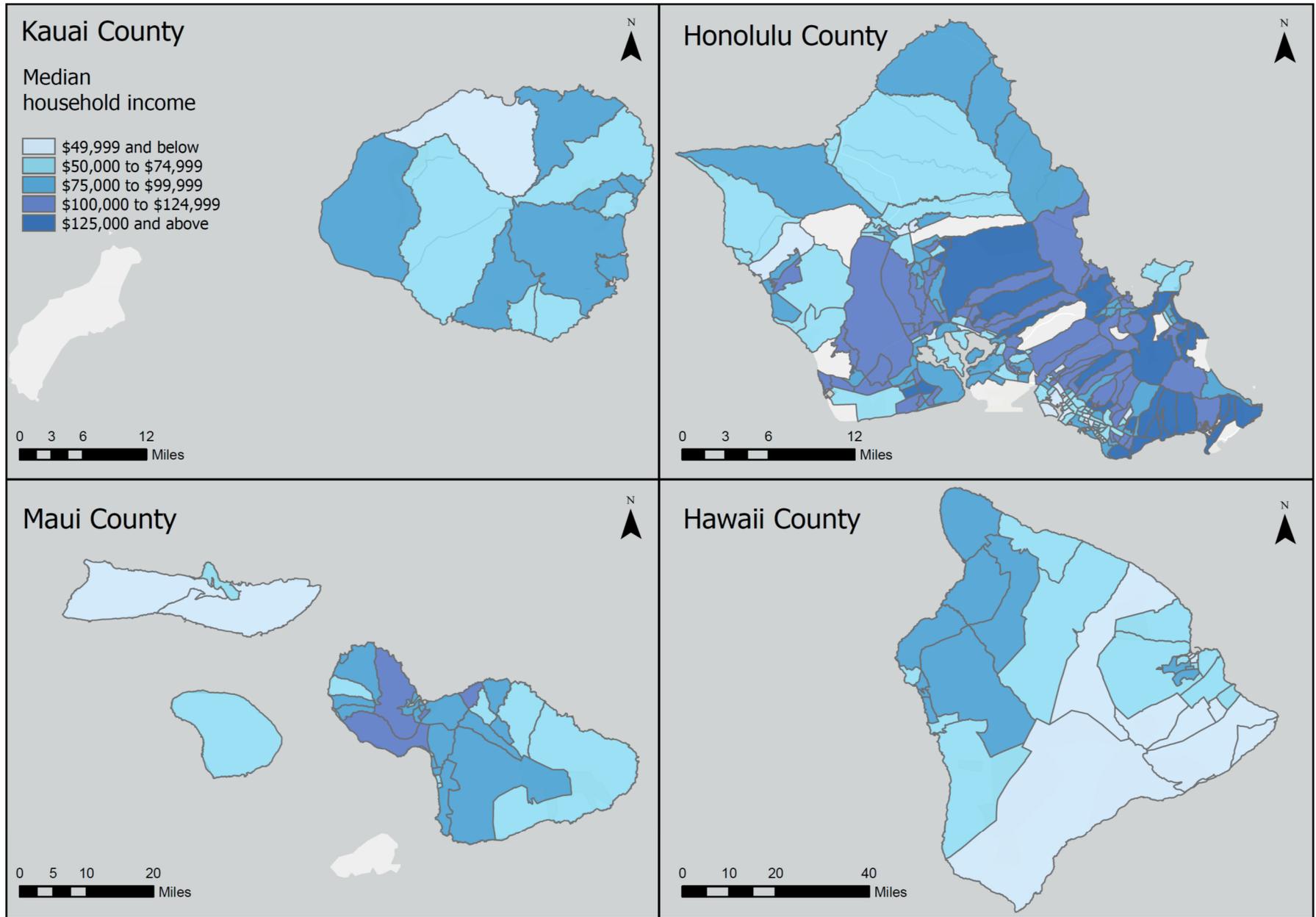
The State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT) provides American Community Survey data at the following link:

- <http://census.hawaii.gov/acs/>

Figure 1 provides the MHI for the four (4) applicant/borrower counties by census tract (2015-2019); this data is from "Map 2" of the DBEDT Highlights from the 2015-2019 ACS 5-Year Data for Hawai'i dated December 10, 2020. The applicant/borrower county meets the affordability criteria if their project serves the area(s) that have MHI(s) within the following ranges:

- \$49,999 and below; and
- \$50,000 to \$74,999.

Figure 1: MHI, State of Hawai'i, by Census Tracts: 2015-2019



research Average value over the 5-year period in 2019 dollars. Based on survey data and subject to sampling variability.
economic Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-year Estimates.
analysis Map produced by the Research and Economic Analysis Division (READ) of the Department of Business, Economic Development & Tourism (DBEDT).
division

For Residential Cesspool Conversion:

The Hawai'i CWSRF affordability criteria for residential cesspool conversion is described in Table 2. The methodology for the affordability analysis for residential cesspool conversion is from the Cesspool Conversion Finance Research Summary Report (Carollo, 2021). "Affordability" refers to the ability of a household to pay for wastewater services without facing economic hardship. The affordability criteria for residential cesspool conversion utilizes the following indicators for each of the four (4) applicant/borrower counties.

1. Priority areas for cesspool conversion based on environmental and public health risks;
2. Cost impact of cesspool conversions on homeowners;
3. Median household income (MHI);
4. Federal poverty level; and
5. Comparison to local sewer rates.

Historically, affordability for water and wastewater service has been benchmarked as a percentage of MHI. The U.S. Environmental Protection Agency (USEPA) has advanced this metric in the past, stating that wastewater service should be less than two percent (2%) of income to be considered "affordable" for customers (USEPA, 1997).

Based on the Cesspool Conversion Finance Research Summary Report's Affordability Results, the following assumptions and data were provided in order to calculate the low, average, and high median household income that would be financially burdened (i.e. Estimated Burdened MHI).

Table 2: Hawaii CWSRF Affordability Criteria for Residential Cesspool Conversion

| Item | | Low | Average | High |
|--|------------|--------------------|---------------------|---------------------|
| Estimated installation cost ⁽¹⁾ | Assumed | \$10,000.00 | \$23,000.00 | \$38,000.00 |
| Quantity of years in loan ⁽¹⁾ | Assumed | 20 years | 20 years | 20 years |
| Quantity of months in loan ⁽¹⁾ | Assumed | 240 mos. | 240 mos. | 240 mos. |
| Annual interest rate ⁽¹⁾ | Assumed | 4%/yr. | 4%/yr. | 4%/yr. |
| Monthly interest rate ⁽¹⁾ | Assumed | 0.333%/mo. | 0.333%/mo. | 0.333%/mo. |
| Monthly installation repayment cost | Calculated | (\$60.60)/mo. | (\$139.38)/mo. | (\$230.27)/mo. |
| Total installation repayment cost | Calculated | (\$14,543.53) | (\$33,450.11) | (\$55,265.41) |
| Monthly O&M cost ⁽¹⁾ | Assumed | (\$33.00)/mo. | (\$71.00)/mo. | (\$109.00)/mo. |
| Estimated total monthly cost | Calculated | (\$93.60)/mo. | (\$210.38)/mo. | (\$339.27)/mo. |
| Estimated total annual cost | Calculated | (\$1,123.18)/yr. | (\$2,524.51)/yr. | (\$4,071.27)/yr. |
| USEPA "affordable" percent ⁽¹⁾ | Provided | 2% of MHI | 2% of MHI | 2% of MHI |
| Estimated Burdened MHI | Calculated | \$56,159.00 | \$126,225.50 | \$203,563.50 |

Notes:

(1) Information is from Cesspool Conversion Finance Research Summary Report prepared by Carollo dated January 2021.

The applicant/borrower county meets the affordability criteria for residential cesspool conversion if the residential cesspool is located in an area that has an MHI less than or equal to \$126,225.50, which is the average Estimated Burdened MHI.